SIGNIFICANT PERMIT REVISION DESCRIPTION

This permit is a significant permit revision of Air Quality Class I Permit No. 31876 issued to Arizona Public Service Company (APS), Yucca Power Plant, and authorizes APS to install and operate an inlet fogging with overspray system on each of the CT1, CT2, and CT3 simple-cycle combustion turbines at the plant. Operation of the fogging/overspray systems will decrease the temperature of the air entering the turbine, thereby increasing the mass flow rate through the unit and consequently increasing the power output. To avoid being affected by the New Source Review provisions, APS is voluntarily accepting hourly and seasonal limitations pertaining to the operation of the fogging systems. As a result, the annual increases of NOx, CO, PM_{10}, and VOC emissions are estimated to be within 5.7, 0.3, 0.1, 0.03 tons per year, respectively. The proposed change meets all requirements for a significant permit revision under A.A.C. R18-2-320.

ADDENDUM (SIGNIFICANT REVISION) NO. 41493 TO AIR QUALITY PERMIT NO. 31876 For Arizona Public Service Company - Yucca Power Plant

This Addendum amends Attachment "B" of Permit No. 31876, as revised by Significant Permit Revision No. 41191, by adding another subsection to Section II of the attachment, namely, Subsection E. Alternative Operating Scenario – Inlet Fogging/Overspray Systems. In addition to the terms and conditions of Permit No. 31876, as revised by Significant Permit Revision No. 41191, the Permittee shall be compliant with the terms and conditions required in this addendum.

Attachment "B" of Permit No. 31876, as revised by Significant Permit Revision No. 41191, is hereby amended by adding Subsection E to Section II of the attachment to read as follows:

E. Alternative Operating Scenario – Inlet Fogging/Overspray Systems

The Permittee may elect to install and operate an inlet fogging/overspray systems on each of the CT1, CT2, and CT3 simple-cycle combustion turbines consistent with the following: [A.A.C. R18-2-306.A.11]

1. Operational Limitations

a. *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain each affected combustion turbine and its fogging/overspray system in a manner consistent with good air pollution control practices for minimizing air emissions.* [A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

b. The Permittee shall install, operate, and maintain the fogging/overspray systems in accordance with the manufacturer's specification. [A.A.C. R18-2-306.A.2]

c. *The Permittee shall only operate the fogging/overspray systems during the summer months of May through September in any given year.*
[A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

d. *The total operating hours of the fogging/overspray systems for CT1 and CT2 combined shall not exceed 400 hours per year total in any given year, and the CT3 fogging/overspray system operating hours shall not exceed 200 hours per year total in any given year.* [A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

e. *The average hourly heat input to CT1 or to CT2 for all hours during which the turbine's fogging/overspray system is in operation shall not exceed 296 MMBtu per hour in any given year, and the average hourly heat input to CT3 for all hours during which the turbine's fogging/overspray system is in operation shall not exceed 884 MMBtu per hour in any given year.* [A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

f. *The Permittee shall not operate the fogging/overspray system unless the affected combustion turbine achieves a load of 50% or above.*
[A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

g. *The Permittee shall only burn pipeline natural gas in the affected combustion turbine during the period when the turbine's fogging/overspray system is in operation.* [A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

2. Monitoring, Recordkeeping and Reporting

a. For each fogging/overspray system when it operates, the Permittee shall keep a daily log of the date, total operating hours, and type of fuel fired in the affected combustion turbine, and if applicable, the startup and shutdown time of the fogging/overspray system for that day. [A.A.C. R18-2-306.A.3.c]

b. *The Permittee shall install, maintain*, and operate *an instrumentation to continuously monitor, and maintain a record of, the hourly heat input rate in MMBtu per hour of each affected combustion turbine when the turbine's fogging/overspray system is in operation*. [A.A.C. R18-2-306.A.3.c, -331.A.3.c]
[Material permit conditions are indicated by underline and italics]

c. *The Permittee shall install, maintain*, and operate *an instrumentation to continuously monitor, and maintain a record of, the load of each affected combustion turbine during the hours when the turbine's fogging/overspray system is in operation*. [A.A.C. R18-2-306.A.3.c, -331.A.3.c]
[Material permit conditions are indicated by underline and italics]

d. The Permittee shall have available onsite for inspection, a copy of the manufacturer's specification for the fogging/overspray system. [A.A.C. R18-2-309.4.b]

f. The Permittee shall report to the Director consistent with Section XII.B, Attachment "A" of the permit, any incident that exhibits deviation from the operational limitations required under this section. [A.A.C. R18-2-306.A.5.b]

g. The Permittee shall submit to the Director no later than October 31st annually, a report summarizing the performance of the fogging/overspray systems as follows for that given year: [A.A.C. R18-2-306.A.5.a]

(1) Date and time of startups and shutdowns of each fogging/overspray system;
(2) Total hours of operation of each fogging/overspray system;
(3) Average hourly heat input rate in MMBtu per hour for each affected combustion turbine for all hours when the turbine's fogging/overspray system is in operation;
(4) The load of each affected combustion turbine during all startup periods of the turbine's fogging/overspray system; and
(5) All incidents of permit deviation with regard to the fogging/overspray systems.

3. Performance Tests [A.A.C. R18-2-312]

Within 45 days following the initial startup of each fogging/overspray system, the Permittee shall conduct an initial performance test at the stack of each affected combustion turbine to determine NOx and CO emissions as follows:
[A.A.C. R18-2-306.01.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

a. The initial tests shall be conducted for at least 3 runs for each affected combustion turbine;
b. The Permittee shall use the applicable reference methods given in Appendix A to 40 CFR 60 to conduct the tests;
c. The initial tests shall only be conducted during normal representative operation of each affected combustion turbine and its fogging/overspray system, and the Director shall determine such normal representative operating conditions; and
d. All tests shall be conducted and reports submitted following the procedures specified in Section XVIII, Attachment "A" of the permit.